

20. TROPIDONOTUS HYDRUS.—Eastern Turkestan.
21. T. PLATYCEPS.—Mari and Kashmir.
22. TAPHROMETOPUM LINEOLATUM.—Eastern Turkestan.
23. VIPERA OBTUSA.
V. Euphratica, Martin, P. Z. S., 1838, p. 82.
V. obtusa, Dwigubsky, teste Strach Mem. Acad. St. Pet. XXI, No. 4, p. 221.
24. HALYS HIMALAYANUS.—Mari and Kashmir.

AMPHIBIA.

BATRACHIA.

1. RANA CYANOPHLYCTIS.—Between Mari and Kashmir.
2. DIPLOPELMA CARNATICUM.—Tináli between Mari and Kashmir.
3. BUFO VIRIDIS.—Kashmir ; Eastern Turkestan ; Wakhán.
4. B. CALAMITA ?—Kashmir.

XVI.—Notes on a few new Oaks from India.—By S. KURZ.

(With Plate XIV.)

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Some time ago I received, through the kindness of Capt. J. Waterhouse, two acorns collected by Capt. W. G. Hughes, Deputy Commissioner of the hill-districts of Arracan. They were obtained in the hills of Arracan at some 5000 or 6000 ft. elevation and proved interesting, the one as being a full-grown acorn of *Quercus mespilifolia*, a species previously known only from Ava and Prome and which I have hitherto considered (see Flora, 1872, p. 398) to be only a variety of *Q. semiserrata*, but which I must now acknowledge as an entirely distinct species ; the other as being a young specimen of a new species of which a full-grown cluster of acorns from Assam exists in the Calcutta Herbarium. I have in vain tried to obtain either flowers or leaves of this species from the Khasya Hills, and, consequently, am compelled to name and describe it solely from the fruit. I have to do the same in the case of *Q. olla*, another new species from Assam. The figures, however, will, I hope, assist in their future identification. I take this opportunity of giving descriptions of a few other new species collected by myself and others in the Sikkim Himalaya and Burma.

1. QUERCUS XYLOCARPUS, nov. sp., Pl. XIV, Figs. 5—8.

Fructus per 2—3 in massam irregulariter obovoideam 1—2 poll. in diametro connati ; nuces apice tantum liberæ, depresso-globosæ, læves ; cupulæ dum immaturæ nuces omnino includentes demum circulariter apertæ et nucis

apicem exponentes, grosse et irregulariter lignoso-muricatae, glabrae, tuberculis (resp. squamis) brevi-conicis obtusiusculis lineam circiter longis marginem versus minoribus et obsolete obsolete-multiseriatim obtectae.

HAB.—Arracan Yomah, east of Akyab, at 4000 to 5000 feet elevation; Assam. (Hughes).

2. QUERCUS OLLA, nov. sp., Plate XIV, Fig. 9.

Rami adulti laeves, nigri; spica fructifera c. 4 pollicaris, robusta; cupulae liberae cum 1—2 parvis abortivis basi adnatis, subturbinatae, poll. in diametro et circiter $\frac{1}{2}$ poll. altae, crassissimae, fulvello-tomentellae, squamis numerosissimis latissimis atque breviter et abrupte acuminatis multiseriatis obductae; glans depresso-globosa e cupula vix exserta, laevis, nitens, subcapitato-mucronata.

HAB.—Assam (Jenkins).

3. QUERCUS PACHYPHYLLA, nov. sp., Plate XIV, Figs. 1—4.

Arbor 50—60-pedalis, glabra, ramulis nigris, gemmis glabris; folia oblongo-lanceolata, petiolo crasso 2—3 lin. longo suffulta, longe et magis minusve abrupte acuminata, basi inaequali acuta, crasse coriacea, 3—5 poll. longa, costa nervisque circiter 8 utrinque supra impressis subtusque crasse prominentibus percursa; spicae femineae crassae, pruinosae, 3—4 poll. longae; flores feminei 2—4- (vulgo 3-) ni; perigonium brunneo-squamatum villosulum; stigmata 3, raro 4, crasse linearia, lin. fere longa, erecto-patentia; pedunculus fructigerus crassus, 2—4 poll. longus; cupulae maturae 1—1 $\frac{1}{2}$ poll. in diametro, crasse coriaceae, cinereo- v. subgilvo-tomentellae, squamis lato-ovato-trigonis acutis crassis in series circiter 9—12 indistincte annulatum dispositis, vulgo per 2—3 et plures in massam magis minusve confluentes; glans pollicem circiter lata, depressiuscule hemispherica, bene evoluta e cupula fere semiexserta, glabra, nitida, in glomeribus nondum evolutis minus exserta.

HAB.—Frequent in the hill-forests of the Tongloo and Phaloot mountains at 7—8000 ft. elevation (collected also by G. Mann, S. Gamble, etc.)

This species as well as the two foregoing all belong in the vicinity of *Quercus spicata*. *Q. pachyphylla* very much resembles *Q. squamata*, Roxb., a species which in my opinion is incorrectly referred as a synonym to *Q. spicata*.

4. QUERCUS FALCONERI, nov. sp.

Arbor glabra; folia iis *Goniothalami sesquipedalis* simillima, elongato-oblonga, 1 $\frac{1}{2}$ —1 ped. longa, basi acuta, petiolo crasso glabro 3—4 lineali suffulta, breviter acuminata v. apiculata, tenuiter coriacea, utrinque lucida, glabra, nervis numerosis (circiter 20 utrinque) supra impressis, subtus prominentibus,

reticulatione satis obsoletâ ; spicæ fructigeræ $1\frac{1}{2}$ ped. circiter longæ, tomentellæ, glandes obovoideo-globosæ, pollicem fere latæ, læves, styloso-apiculatæ, pallide brunneæ et nitidæ, exsertæ ; cupulæ concavo-explanatæ, marginibus plus minusve revolutis, crasse coriaceæ, extus ferrugineo-velutinæ, intus canescenti-sericeæ, liberæ v. rarius basi tantum connatæ, squamis numerosis triangularibus parvis appressis obductæ.

HAB.—Upper Assam (Falconer). Very nearly allied to *Q. Amherstiana*, Wall.

5. *CASTANEA DIVERSIFOLIA*, nov. sp.

Arbor 40—60-pedalis, novellis fulvo-pubescentibus ; folia valde variabilia, novella chartacea, ovato-oblonga ad ovata, 7—9 poll. longa et 4— $4\frac{1}{2}$ poll. lata, petiolo semipollicari pubescenti suffulta, in nervis utrinque parum pubescentia, nervis reticulatione laxâ crassâ et conspicuâ ; adulta multo minora, coriacea, elliptico-oblonga, breviter et obtuse acuminata, $4\frac{1}{2}$ —6 poll. longa, utrinque pagina v. petiolo et in nervis utrinque puberula et glabrescentia, squamis minutis argenteis destituta ; paniculæ magnæ et robustæ, apicibus ramulorum congregatæ dense fulvo v. cinereo-tomentosæ ; fructus involucrium $1\frac{1}{2}$ poll. fere in diametro, spinis obtectum ; spinæ simplices, strictæ, pubescentes, circa 4 lin. longæ.

HAB.—Common in the drier hill forests of Martaban, at 3,500—5000 ft. elevation.

I describe this species as a *Castanea* connecting *Castanopsis* (including *Lithocarpus*) with *Castanea*. This, of course, is quite a practical division for the differences between all these genera are simply artificial ones.

EXPLANATION OF PLATE XIV.

Figs. 1—4. *Quercus pachyphylla*, Kurz. Fig. 1, fruiting spike ; fig. 2, leaf-branch ; fig. 3, female inflorescence ; fig. 4, female flowers, somewhat magnified.

Figs. 5—8. *Quercus xylocarpa*, Kurz. Figs. 5 and 6, ripe fruit clusters, from above and from below ; fig. 7, unripe, ditto, from Arracan ; fig. 8, scales, somewhat magnified.

Fig. 9. *Quercus olla*, Kurz. Acorns, from the side and from above ; natural size.

XVII.—*On a new Species of Tupistra from Tenasserim.*—By S. KURZ.

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From amongst the many fine plants which I owe to the late Dr. F. Stoliczka I have selected for description this new species of *Tupistra*, a genus that has hitherto been supposed to be monotypic. The present species is remarkable for its stiff robust erect spikes, those of *T. nutans* being short,